During famine, two factors, often working in tandem, facilitate the occurrence of epidemics. These are the impairment of the individual immune system by starvation and the loss of community resistance to the spread of disease. Several phenomena contribute to the latter, among them population movements, neglect of personal and domestic hygiene, and overcrowding of public institutions, such as hospitals, workhouses and jails. Almost any endemic illness has the potential to become epidemic during famine.\(^1\) In Ireland, for hundreds of years, fever, dysentery and smallpox had been the most notorious and destructive diseases and all three reappeared with increased malignity during the Great Famine. The terrifying mortality caused by these scourges was compounded by the presence of other epidemic infections, notably tuberculosis, rheumatic fever, bronchitis, influenza, pneumonia, diarrhoea and measles,\(^2\) and was further exacerbated by the appearance of Asiatic cholera as a pandemic in 1848-9.\(^3\)

‘Famine fever’, the term employed by contemporaries to designate the great despoiler of these years, embraced two distinct but symptomatically related infections, typhus fever and relapsing fever. Eighteenth- and nineteenth-century doctors did not know how these diseases were caused and assigned a whole host of reasons to their generation and diffusion. Some contended that famine was the sole or paramount cause,\(^4\) an explanation that left many unconvinced. The latter claimed that food shortage was only one of several social issues involved. There was also poverty, the wretched housing of the poor, the paucity and inferior quality of their diet, their lack of clothing and fuel, dirt, depression, and

4. See, for instance, D.J. Corrigan, On Famine and Fever as Cause and Effect in Ireland, with Observations on Hospital Location, and the Dispensation in Outdoor Relief of Food and Medicine (Dublin, 1846), pp. 1-33.
intoxication, not to mention the pig in the kitchen and the middens at the front door. The strongly opinionated William Kingsley, physician to the Roscrea fever hospital in County Tipperary, complained to the Board of Health in June 1847 that the ubiquitous cess-pools which disfigured the cabins of the poor were ‘a constant, fertile and permanent source of typhus fever, in consequence of the putrid effluvia exhaled from them and blown by the wind into the interior of those filthy habitations’. They were also a national disgrace, he said.

Some Irish medical practitioners traced the country’s recurring outbreaks of fever to what earlier writers termed ‘the epidemic constitution’, some unspecified connection between atmospheric or electrical phenomena and the generation of disease.

It is now known that the vector of typhus fever and relapsing fever was not famine, nor social distress, still less atmospheric peculiarities, but pediculus humanus, the human body louse. The social disruption and squalor caused by famine favoured lice infestation. The lice feasted on the unwashed and susceptible skin of the poor, multiplied in their filthy and tattered clothing, and went forth, carried the length and breadth of the country by a population who had taken to the roads, vagrants, beggars and the evicted, as well as those who had abandoned their homes voluntarily. The mushrooming lice population found new and unresisting hosts at food depots and relief works, at social and religious gatherings, and in many public institutions which proved to be veritable breeding grounds.

The character of ‘the late disastrous epidemic’, to use William Wilde’s term of late 1848, varied considerably. Typhus fever prevailed in some parts of the country, relapsing fever in others. In certain districts the primary disease changed from typhus to relapsing fever and back again to typhus. Elsewhere, the two conspired together as ‘famine fever’. No part of the country was immune, although some areas were more seriously affected than others. Relapsing fever was the prevalent disease among the destitute and the starving. As its name indicates, the disease is characterised by recurring bouts of fever. High temperature, generalised aches and pains, nausea, vomiting, nose bleeding and jaundice are features of the disease. The first attack ends after five or six days with a sharp

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5 See, for instance, First Report of the General Board of Health (Dublin, 1822), p. 118; Poor Inquiry (Ireland), Appendix B, Containing General Reports upon the Existing System of Public Medical Relief in Ireland; Local Reports upon Dispensaries, Fever Hospitals, County Infirmaries and Lunatic Asylums; with Supplement, Parts 1 and 2, Containing Answers to Questions from the Officers etc. of Medical Institutions, British Parliamentary Papers, 1835 (369) xxxii, part 2, supplement, pp. 1-262.

6 Dublin Medical Press, 16 June 1847, p. 382.


crisis attended by profuse sweating and exhaustion. The symptoms return after about a week and there may be several such relapses before the disease runs its course. Such a progression was described by one midlands doctor as ‘the fever being lighted up three or four times’. These recurring attacks further weakened an already debilitated population and left them very vulnerable to a host of other infections, notably dysentery and diarrhoea.

Fever and other epidemic infections appeared as famine’s shadow during the winter and spring of 1846-7, following the general failure of the potato crop. Government officials in Dublin were inundated with reports of the distress and social dislocation that prevailed. In late December 1846, Dr Henry J. Smith, Mountrath, informed the Lord Lieutenant that the ill effects of bad and insufficient food were already apparent in the gaunt features and emaciated frames of the great majority of the poor. In mid-January 1847, fever and dysentery ‘of an alarming and malignant character’ were reported from Carlingford, County Louth. The dispensary was fourteen miles from the union poorhouse and there was no other hospital in the county. Similar reports were received from Nenagh, County Tipperary, Omagh, County Tyrone and Coolavin, County Sligo, where there was neither dispensary nor resident apothecary. It was thought that the workhouse fever hospital at Boyle, which was then under construction, would not be capable of accommodating more than one-tenth of the union’s fever patients. Thousands fleeing from famine and pestilence flocked into Galway in the opening weeks of 1847, all but submerging the fever hospital and workhouse hospital in the process. Such an influx, there and elsewhere, greatly alarmed the residents, who feared that the migrants might be carriers of fever and other infectious diseases.

The Central Board of Health, which had been established in March 1846 and disbanded in the following August due to a lack of demand for their services, were reappointed in the first week of February 1847. The Board consisted of the prominent Dublin medical practitioners, Dominic John Corrigan and Sir Philip Crampton, the chemist Sir Robert Kane, who was medically qualified but who had almost entirely ceased to practice by the time of the Famine, and two senior civil servants, Sir Randolph Routh and Edward Twistleton. In effect, Corrigan and Crampton were the Board of Health. At their first meeting, the Board instructed Dr Robert William Smith of Eccles Street, Dublin, to inspect the overcrowded and badly administered Lurgan workhouse. They considered a request for aid from the Tullamore board of guardians, and a report

10 CSORP 1847 H 363, NAI.
11 CSORP 1847 H 802, NAI.
12 CSORP 1847 H 1410, CSORP 1847 H 1347, CSORP 1847 H 4126, NAI.
13 CSORP 1847 H 962, NAI.
14 CSORP 1847 H 1347, NAI.
from John H. Leahy, physician to the Drimoleague dispensary in County Cork, in which he stated that fever, dysentery and dropsy had increased to such an extent throughout the district that he was unable to cope. Thereafter, correspondence of a similar nature poured into the office on a daily basis. Some communications referred to the complete absence of medical relief in many parts of the country and requested the establishment of temporary fever hospitals. Others commented on the overcrowding and indebtedness of county and district fever hospitals and expressed the fears of the community concerning the possible closure of these institutions through lack of funds. A report from Killarney in April 1847 stated that people were 'literally dropping in the streets and perishing in their miserable cabins'. The local workhouse was full, as was the fever hospital, which was the only one in an area of 144 square miles. The hospital had been built to accommodate fifty-four patients but now contained 130 and its funds were almost completely exhausted. The managing committee of the Clonmel fever hospital found themselves in a similar situation. They appealed for government assistance in March 1847, claiming that their position was 'truly awful'. Like other committees, they found it impossible to raise funds locally, such were the demands on the charitable. The response in this instance, as it was in all such cases, was that the government did not have any funds at their disposal for the maintenance of fever hospitals or other charitable institutions.

The government's persistent refusal to sanction emergency funding for the country's existing fever hospitals and dispensaries was a grave mistake. These institutions should have been the first line of defence against infection and their continued existence guaranteed. On at least two occasions in the spring of 1847, the Central Board of Health warned the government that the country was on the verge of a fever epidemic as severe and as widespread as any that had yet occurred. Corrigan and Crampton arrived at this conclusion after receiving a letter from Samuel Edge, MD, physician to the Doonane fever hospital in the barony of Slievemangue, Queen's County, in which he depicted the densely populated and impoverished district where he resided as 'one large hospital', a locality where starvation, fever, dysentery and diarrhoea were wreaking a terrible toll. Ten inquests had been held there during the previous week and a verdict of death by starvation returned in each case. The fever hospital was in debt, he said, and people were dying of disease in the shadow of an institution which should have been able to relieve them. The local board of Poor Law guardians refused to help, when asked. The Poor Law commissioners replied that they did not have the power, the Lord Lieutenant that he did not have the means.

The Board of Health believed that the existing legislation relating to fever and other contagious diseases in Ireland was inadequate to meet the current

15 CSORP 1847 H 1704, NAI. 17 CSORP 1847 H 3513, NAI.
16 CSORP 1847 H 4789, NAI. 18 CSORP 1847 H 3420, NAI.
emergency. They informed the Lord Lieutenant that the fever act of 1818 had 'not worked well'. They and others were concerned about the way in which fever hospitals established under its provisions were funded and administered, and there had been rumours about peculation and jobbing. The amended Poor Law act of 1843, which empowered boards of guardians to provide relief for the poor of the union afflicted with fever, was also defective. Experience had convinced Corrigan and Crampton that Poor Law guardians were 'not fitted for the sole superintendence of the care of the sick poor'. The Board claimed that this act and the temporary fever act of 1846 shared 'the same great fundamental error'. The question of relieving the sick and of implementing precautionary or preventive measures was decided at local level and was bound to be influenced by local concerns. The result was often unnecessary expenditure or the opposite, a refusal to sanction aid for the sick. If a board of guardians adopted the latter course, the Board of Health was largely powerless to act, there being no other method of supplying the necessary funds.

Defective legislation was compounded by the deficiencies of the country's existing medical institutions. The latter were considered by the Board of Health as 'peculiarly unfitted' to cope with the demands of the Famine. The institutions to which they referred were the medical charities which had evolved during the eighteenth and early nineteenth centuries to provide free medical aid to the sick poor. There were approximately 650 in existence by the mid-1830s, consisting of 528 dispensaries, 64 fever hospitals, 38 county and other provincial infirmaries, 11 district lunatic asylums, and 7 voluntary hospitals in Dublin. A decade later, when the Great Famine began, there were 664 dispensaries, 101 fever hospitals and 41 infirmaries catering for the many needs of the sick poor. Those who were suffering from fever and other contagious diseases were largely debarred from the infirmaries and were tended, instead, by dispensary medical officers, or in fever hospitals, where such existed. The medical charities came under enormous pressure during the Famine. Writing in May 1847, Dr Stirling

19 58 Geo. 111, c. 47, 'An act to establish fever hospitals, and to make other regulations for relief of the suffering poor, and for preventing the increase of infectious fevers in Ireland', 30 May 1818.
20 6 and 7 Vic., c. 92, 'An act for the further amendment of an act for the more effectual relief of the destitute poor in Ireland', 24 August 1843
21 9 and 10 Vic., c. 6, 'An act to make provision, until the first day of September one thousand eight hundred and forty-seven, for the treatment of poor persons afflicted with fever in Ireland', 24 March 1846
22 CSORP 1847 H 3420, NAI. See also, D.J. Corrigan to the Lord Lieutenant, 24 February 1847, OP 1847/147, NAI.
23 Report of the Commissioners of Health, Ireland, on the Epidemics of 1846 to 1850, p. 2.
25 Report from the Select Committee of the House of Lords on the Laws Relating to the Destitute Poor and into the Operation of the Medical Charities in Ireland; Together with the Minutes of
of Thomastown observed that he and his colleagues in the dispensary service were 'overwhelmed with work'.

Dispensaries dated from an 1805 act of parliament and were the most important branch of the medical charities system. They were intended, as one parliamentary inquiry phrased it, to bring relief 'to the door of the sick'. However, the entire dispensary system was grossly abused and its usefulness was further limited by a number of inherent defects. Dispensaries were not established on any set principle but could be opened anywhere, irrespective of need or demand. The only requirement was the procurement of local subscriptions, which the county grand jury was then obliged to match. The combined amount was placed at the disposal of a committee elected from among the subscribers, to be used at their discretion to provide medical relief for the sick poor. The method of funding, irregular and unreliable as it was, placed great strains on the system and resulted in a very uneven distribution of dispensaries. They were mainly concentrated in the towns and the better off areas, where subscriptions could more readily be raised, and were scarce in the poorer and remoter rural districts, where the need for them was greatest.

In general, the contract that was understood to exist between the medical officer and the subscribers was that the sick poor of the district who attended the dispensary would be supplied with medicine and advice, and that a limited domiciliary service would also be provided. Dispensaries generally opened for a couple of hours on two or three mornings of the week but there was great variation as it was left to each dispensary committee to determine the times at which the doctor would attend. All rural dispensaries and some urban ones had only one medical officer attached. Few had assistants, which meant that emergency aid was often unavailable, and the institution was unstaffed for lengthy periods. Assistants, where they were employed, were generally poorly paid and unqualified. There was no obligation on medical officers to reside in their dispensary districts. Some lived in towns several miles away, where they had their private practice.

The contagiousness of fever was generally conceded, as was the necessity of isolating the infected. To this end, three different types of institutions, county, district and Poor Law union fever hospitals, evolved in the first half of the nineteenth century. The latter were the most recent, dating from 1843. They were supported out of the rates and were open to all who resided within the Poor Law union. County fever hospitals, which admitted the infected from all

Evidence taken before the said Committee, British Parliamentary Papers, 1846 (694) xi, part 1, pp. xxv-xxvi.

26 Dublin Medical Press, 2 June 1847, p. 342.
27 Report from the Select Committee of the House of Lords on the Laws Relating to the Destitute Poor and into the Operation of the Medical Charities in Ireland, p. xxvi.
parts of the county, were entirely supported by local taxation. They evolved fitfully and not every county had one. In the 1830s, Monaghan, Donegal, Tyrone, Leitrim, Fermanagh, Roscommon, Mayo and Longford, were without a fever hospital of any description. In another five counties, the single fever hospital was so small and the funds so scarce that its use was extremely limited. District fever hospitals were the product of the 1816-19 fever epidemic, when as many as 1,500,000 people may have been infected. These institutions were supported by a combination of local philanthropy and local rates. Unlike county fever hospitals, there was no limit to the number which could be established. However, their method of funding, not least the necessity of raising local subscriptions on an annual basis, retarded their development.°

As the Board of Health feared, the medical charities, along with the country’s other public institutions, such as jails, bridewells and workhouses, were swamped by the Famine’s victims. The clamour, confusion and consternation attendant on a workhouse were graphically captured by a contemporary writer, Dr R.R. Madden. On a bitter February morning in 1851, men, women and children, conservatively estimated at 1000, sought admission to the Kilrush union workhouse in County Clare. The precincts of the workhouse resembled the suburbs of a town during a fair, according to Madden. Low backed cars, from which the horses had been removed, were ranged along the front wall of the building. The cars were occupied by the old and the young, the majority too listless, emaciated or diseased to stand or even sit upright. Those who had been unable to procure transport had crawled to the workhouse from distant parts and were to be seen squatting near the entrance, waiting their turn to be called. The courtyard was thronged with a dense mass of misery, ‘clamouring and pressing forward, the less weak thrusting aside the more infirm, the young hustling the old, the women pulling back the children, larger children pushing back the smaller, uttering confused cries of pain, impatience, anger and despair’.°

This Hogarthian scene was simply a reflection and a repetition of those that had occurred throughout the country during the previous four years. The numbers admitted to hospitals and workhouses were often so great that overcrowding became a serious health problem. The Mitchelstown workhouse, originally intended for 900 inmates, contained 1533 paupers by the first week of February 1847. One hundred and seventy eight of these were in hospital, two, three and sometimes four to a bed, and the increasing morbidity and mortality figures

30 Kilrush union workhouses, CSORP 1851/03508, NAI.
were causing alarm. According to the workhouse doctor, those who could not be admitted were left to die on the highways or to linger on in their own hovels, 'a helpless mass of famine and disease'.

A few weeks later, it was reported that there were 418 patients in the Armagh workhouse hospital, which was originally designed to accommodate 100. Two hundred and fifty five were fever stricken, as were the medical officers. Eight hundred and thirteen of the 960 inmates of Castlerea workhouse were sick on an April day in 1847.

Elsewhere, the situation was even worse. In the opening months of 1847, the Cork, Bantry and Lurgan workhouses were investigated by the Poor Law commissioners and by the Board of Health, following reports of overcrowding, mismanagement, neglect and excessive mortality. Ninety-five of the 800 inmates of the Lurgan workhouse died during the week ending 6 February 1847. During the following week, 164 deaths were recorded in the Cork union workhouse, where the number of inmates exceeded the physicians' recommendations by 1000. They and Dr Stephens, the medical inspector of the Board of Health, attributed the alarming sickness and mortality in the institution to the debilitated or dying condition of the poor on admission, to overcrowding and to poor ventilation. The hospital attached to the Bantry union workhouse was found on inquiry to be in such a frightful state of filth and neglect that the Poor Law commissioners requested the medical officer's resignation and dismissed the master and matron from office.

While mismanagement and negligence were a feature of some institutions and while the conditions in many were quite appalling it would be wrong to attach the entire blame to administrative indifference. The system was simply unable to cope with the demands made upon it by the Famine. Government response to the spread of disease was indecisive and inadequate. Medical officers, boards of guardians and local relief committees were presented with an appalling dilemma. They were often the arbiters of life and death and were generally loath to exclude the starving, the sick and the dying from relief and shelter. The Lurgan guardians, for instance, attributed the defects that were detected in their workhouse to the pressure of the times and to their own reluctance to reject any of the poor people who swarmed round the entrance, seeking admission.

Such a reaction was regarded as highly irresponsible by the Board of Health and the Poor Law commissioners. They were no less charitable or humane than hospital or workhouse administrators but were convinced that overcrowding was a major factor in generating disease and as such posed a grave threat to

31 CSORP 1847 H 1358, and CSORP 1847 H 1704, NAI.
32 CSORP 1847 H 3574, NAI.
33 CSORP 1847 H 5011, NAI.
public health. They contended that the indiscriminate institutionalisation of the sick and the hungry was a greater evil than allowing them to fend for themselves outside. The Board of Health were convinced that individuals, no matter how scanty and uncertain their resources, had a better chance of surviving famine than they had of avoiding death within a disease-ridden institution. In mid-April 1847, the Kilkenny guardians were instructed to reduce 'the fearful amount of sickness in the workhouse', which, the Board felt, posed an unacceptable risk to all classes in the city and its environs. 'Fever, once generated, will not be confined within the crowded camp hospital, the jail or the workhouse in which it may have originated', they observed. If unchecked, the disease would spread among rich and poor alike, involving all in a common danger. The Board of Health emphasised the way in which fever variously affected the different social classes. According to their reckoning, the mortality rate from the disease was one in thirty among the poor but one in two among their social superiors.

To relieve the pressure on overcrowded institutions, emergency legislation, dating from 24 August 1846, enabled the Board of Health to provide temporary fever hospitals or dispensaries when and where required. Between February 1847 and August 1850, when the Board of Health was finally disbanded, 576 such applications were received, 373 of which were granted. The Board of Health demanded weekly hospital returns which showed that 332,462 patients were treated in these institutions, 173,723 females and 158,739 males. The overall death rate of slightly more than ten per cent masked the considerable variations that occurred in different institutions and at different times. During the six months ending 7 November 1849, the mortality rate at Carnacregg hospital in the Ballinasloe union was almost thirty per cent, which the medical officer, Dr Butler, attributed to overcrowding, the patients' poor general health on admission, and the fact that many endured successive attacks of fever, dysentery and cholera. His colleague in Killaloe, County Clare, assigned high institutional mortality 'to the debilitated condition of the patients, many of whom were brought to hospital in a hopeless state'. Deprivation and general debility left much of the general population vulnerable to a host of infections. In the Limerick union hospital, for instance, where 235 of the 817 patients died during a period of six months in 1849, dysentery and measles, which affected the old and deprived and very young children respectively, were responsible for the entire mortality. A contributory factor to the twenty-five per cent death rate in the Tulla hospital, according to the medical officer, was the poor condition of the building. The canvas roof left in both wind and rain. The floors were constantly wet and the wards full of smoke, 'from the necessity of lighting the fire on the floor'.

35 CSORP 1847 H 5282, NAI.
36 Report of the Commissioners of Health, Ireland, on the Epidemics of 1846 to 1850, pp. I–II.
Where temporary fever hospitals were sanctioned, the Board of Health recommended that an existing building be procured and adapted for the purpose. If this were not feasible, or if additional accommodation were required in existing hospitals, the Board supplied the applicants with plans for the construction of wooden fever sheds and bedsteads, of a simple and economical design, which had been drawn up by architect of the Poor Law Commission. These wooden sheds were preferred by the Board of Health to tents belonging to the Ordnance department which were used in some places for part of 1847. Three different types of tents were employed, hospital tents, marquees and round tents, which could accommodate 14, 4, and 3 fever patients respectively. Dominic Corrigan considered that marquees and round tents were 'ill adapted for hospital purposes'.

Where possible, temporary fever hospitals and dispensaries were staffed by local doctors, who were paid five shillings a day in addition to their permanent salaries. This was considered an insulting level of remuneration by many members of the profession, especially the Dublin based leadership, who had little or no connection with the service. The ensuing controversy was simply another feature of the struggle that had been going on between the government and the medical profession for a decade to wrest control of the medical charities. A petition, objecting to the level of payment, was organised and supported by the leading lights of the profession and signed by some 1100 doctors nation-wide. It was unceremoniously rejected by the government on the advice of the Central Board of Health, who cited a number of precedents and reasons to support their contention that the recommended salary was both just and adequate.

Thereafter, Crampton and Corrigan were subjected to the grossest personal and professional abuse. Their motives were questioned, their activities mercilessly scrutinised. The Central Board of Health ignored the profession's anger and invective and persevered with their unenviable and unpaid task. They continued to give unstinting support to the doctors in their employ who manned the emergency health institutions and sheltered them from the sniping, strictures and meanness of boards of guardians and local committees of various hues.

The medical profession emerged subdued and dejected from the Famine, their numbers and morale severely depleted. Many doctors acknowledged their

38 CSORP 1847 H 7867, NAI.
39 CSORP 1847 H 5970, NAI.
40 R.J. Graves, A Letter Relative to the Proceedings of the Central Board of Health in Ireland (Dublin, 1847), reprinted from Dublin Quarterly Journal of Medical Science, iv (1847), pp. 513-44.
41 CSORP 1847 H 7888, NAI; see also, Report of the Commissioners of Health, Ireland, on the Epidemics of 1846 to 1850, pp. 45, 55-6.
42 See, for instance, Dublin Medical Press, 1 December 1847, pp. 345-6.
43 See, for instance, CSORP 1847 H 7794; 1847 H 8034, NAI.
inability to contain the successive waves of disease that swept over the country. They were simply unable to cope with the sheer scale of the Famine, a disaster which almost completely overwhelmed the country’s medical resources. In its wake, the Medical Charities Act of 1851 provided for the introduction of a state funded dispensary system, to provide free medical relief to the sick poor. The system was administered by the Poor Law Commission, who were also given responsibility for the fever and county hospitals, as well as the workhouse infirmaries. With some modifications, this system survived until relatively recent times.\textsuperscript{44}